

## FAILOVER AND LOAD BALANCING

ABSTRACT

Provided are techniques for failover when at least one of a first network adapter and a data path through the first network adapter fails, wherein the first network adapter is connected to a filter driver, and wherein the first network adapter is connected to a second network adapter. With the filter driver, a path fail notification is received that at least one of the first network adapter and the data path through the first network adapter has failed. With the filter driver, packets directed to the first network adapter are rerouted to the second network adapter.

Also provided are techniques for failover when a network adapter fails, wherein the network adapter is connected to a miniport driver that is connected to a filter driver. With the miniport driver, it is determined that at least one of the network adapter and a data path through the network adapter has failed. With the miniport driver, the filter driver is notified that at least one of the network adapter and the data path through the network adapter has failed.

Moreover, provided are techniques for static load balancing implemented in a filter driver. The filter driver determines a data quota for each of multiple data paths. The filter driver identifies a maximum number of commands for a target logical unit. The filter driver selects a data path on which to send a packet based on the data quota and the maximum number of commands.

Furthermore, provided are techniques for dynamic load balancing implemented in a filter driver. The filter driver determines a data transfer speed for each of multiple data paths. The filter driver updates a load balancing share for each of the multiple data paths based on the data transfer speed of each of the multiple data paths. The filter driver selects a data path on which to send a packet based on the load balancing share of each of the multiple data paths.